

GenCore version 5.1.3  
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OM nucleic - nucleic search, using sw model  
Run on: December 6, 2002, 22:41:46 ; Search time 2691.5 Seconds  
(without alignments)  
16489.608 Million cell updates/sec  
Title: US-10-025-514-7  
Perfect score: 1525  
Sequence: 1 tctagaccatgctggaag.....ccaaactcagaagtatgcgac 1525

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 2054640 seqs, 14551402878 residues  
Total number of hits satisfying chosen parameters: 4109280

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : GenEmbl : \*

- 1: gb\_ba.\*
- 2: gb\_htg.\*
- 3: gb\_in.\*
- 4: gb\_om.\*
- 5: gb\_ov.\*
- 6: gb\_pat.\*
- 7: gb\_ph.\*
- 8: gb\_pl.\*
- 9: gb\_pr.\*
- 10: gb\_ro.\*
- 11: gb\_scs.\*
- 12: gb\_sy.\*
- 13: gb\_un.\*
- 14: gb\_vi.\*
- 15: em\_ba.\*
- 16: em\_fun.\*
- 17: em\_hum.\*
- 18: em\_in.\*
- 19: em\_mu.\*
- 20: em\_om.\*
- 21: em\_or.\*
- 22: em\_ov.\*
- 23: em\_pat.\*
- 24: em\_ph.\*
- 25: em\_pl.\*
- 26: em\_ro.\*
- 27: em\_scs.\*
- 28: em\_un.\*
- 29: em\_vi.\*
- 30: em\_htg\_hum.\*
- 31: em\_htg\_inv.\*
- 32: em\_htg\_other.\*
- 33: em\_htg\_mus.\*
- 34: em\_htg\_pln.\*
- 35: em\_htg\_rod.\*
- 36: em\_htg\_mam.\*
- 37: em\_htg\_vrt.\*
- 38: em\_sy.\*
- 39: em\_htgo\_hum.\*
- 40: em\_htgo\_mus.\*
- 41: em\_htgo\_other.\*

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query %			DB	ID	Description
		Match	Length				
1	630.4	41.3	1308	6	AR111412	AR111412 Sequence	
2	629.4	41.3	1185	6	AR111411	AR111411 Sequence	
3	442.4	29.0	1345	9	HUMAJATB	M11465 Human alpha	
4	438	28.7	1434	6	E00631	E00631 DNA encodin	
5	436.4	28.6	1312	6	I02706	I02706 Sequence 1	
6	434.8	28.5	1584	9	BC011991	BC011991 Homo sapi	
7	433.2	28.4	1352	6	AX335339	AX335339 Sequence	
8	433.2	28.4	1352	9	HUMAJATM	K01396 Human alpha	
9	433.2	28.4	1371	6	AX335338	AX335338 Sequence	
10	433.2	28.4	1371	9	HSATPR1	X01683 Human mRNA	
11	433.2	28.4	1399	9	AK026174	AK026174 Homo sapi	
12	433.2	28.4	1434	6	E00195	E00195 cDNA encodi	
13	433.2	28.4	1434	6	I04196	I04196 Sequence 3	
14	433.2	28.4	1434	6	I04272	I04272 Sequence 1	
15	433.2	28.4	1434	6	I07849	I07849 Sequence 2	
16	433.2	28.4	1435	6	AX019486	AX019486 Sequence	
17	433.2	28.4	2478	17	AF130068	AF130068 Homo sap	
18	431.6	28.3	1337	9	HUMAJAT2	J02619 Human 2 typ	
19	431.6	28.3	1378	6	I02398	I02398 Sequence 8	
20	431.6	28.3	1431	9	BC015642	BC015642 Homo sapi	
21	431.6	28.3	2571	17	AF113676	AF113676 Homo sapi	
22	430.4	28.2	1185	6	AR111410	AR111410 Sequence	
23	430	28.2	1299	6	I07949	I07949 Sequence 2	
24	430	28.2	1317	6	I00556	I00556 Sequence 2	
25	430	28.2	1378	6	I03509	I03509 Sequence 6	
26	430	28.2	1378	6	I07947	I07947 Sequence 4	
27	430	28.2	1434	6	I01352	I01352 Sequence 1	
28	428.4	28.1	1308	9	BABAIATA	J00321 Papio hamad	
29	428.4	28.1	1378	6	I01227	I01227 Sequence 2	
30	426.8	28.0	1185	6	A01846	A01846 Human mRNA	
31	418.4	27.4	1191	9	AB004044	AB004044 Cercopith	
32	411.2	27.0	1390	6	AX202089	AX202089 Sequence	
33	408.8	26.8	1356	6	I36163	I36163 Sequence 16	
34	407.2	26.7	1356	6	I36161	I36161 Sequence 12	
35	404	26.5	1356	6	I36164	I36164 Sequence 18	
36	401.4	26.3	2013	6	AX472008	AX472008 Sequence	
37	392.2	25.7	1351	10	AB000550	AB000550 Spermophi	
38	389	25.5	1372	10	AB000552	AB000552 Callosciu	
39	386.8	25.4	1351	4	SSANTIELA	X88780 S.scrofa mr	
40	378	24.8	1306	10	RATATRA1	M32247 Rat alpha-	
41	377.4	24.7	1352	10	S77822	S77822 alpha-1-an	
42	376.4	24.7	1380	10	RATAPI	D00675 Rat mRNA f	
43	376	24.7	1343	10	AB000546	AB000546 Tamias si	
44	375.6	24.6	1242	6	E13268	E13268 Tamias asia	
45	370.6	24.3	1380	4	BTA1AT	X63129 B.taurus mr	

ALIGNMENTS

RESULT 1	AR111412	AR111412	Sequence 6 from patent US 6127145.	DNA	linear	PAT 14-FEB-2001
LOCUS	AR111412	Sequence 6 from patent US 6127145.	1308 bp	DNA	linear	
DEFINITION	AR111412	Sequence 6 from patent US 6127145.	1308 bp	DNA	linear	
ACCESSION	AR111412	Sequence 6 from patent US 6127145.	1308 bp	DNA	linear	
VERSION	AR111412.1	GI:12828260				
KEYWORDS						
SOURCE		Unknown.				
ORGANISM		Unknown.				
REFERENCE		Unclassified.				
AUTHORS		1 (bases 1 to 1308)				
TITLE		Sutliff,T.D. and Rodriguez,R.L.				
JOURNAL		Production of .alpha..sub.1 -antitrypsin in plants				
FEATURES		Patent: US 6127145-A 6 03-OCT-2000;				
		Location/Qualifiers				

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source 1.1308
BASE COUNT 298 a 442 c 363 g 205 t
ORIGIN

Query Match 41.3%; Score 630.4; DB 6; Length 1308;
Best Local Similarity 70.8%; Pred. No. 2.1e-125;
Matches 838; Conservative 0; Mismatches 346; Indels 0; Gaps 0;

QY 335 GGAAGACCTCAAGGCGGCGCTCAAAAACGACACGACGATCATACGACGACGACCA 394
DB 116 GGAGACCGCGAGGCGCGCGCCAGAAAGACGACGACGACGACGACGACGACGAC 175
QY 395 TCGGACTTTTAAATAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 454
DB 176 CCGGAGCTTCAACAGATCACCCGAAATTTGGCCGAAATTCGCTTCACGCTGTAC 235
QY 455 ATTAGTCATCAAGTAATTTACTTAACATTTTTTTTATAGTCTGTGTTTCTATTG 514
DB 236 GCTCGGCGACCAAGTCCAACTCCACCAACATCTTCTTACGCGGCTGAGCATCGC 295
QY 515 TTTCGCCATGTTTGTAGTTTAAAGCCGATACCCATGACGAGATTTTAGAGGTTT 574
DB 296 CTTCGCCATGCTGTCCCTGGGTACCAAGCGGACACCCACGACGAGATCCTCGA 355
QY 575 AAATTTTAAATTTGACGGAATCCCAAGAGCCCAAAATTCACGAGGTTTTCAGAGT 634
DB 356 GAATTTCACTTACGAGATCCCGGAGCGGAGATCCACGAGGCTTCCAGGAGTCTG 415
QY 635 GAGAACTTTGAATCAACCTGATTCCTCAATTCGCAATTAATTAATTAATTAATTT 694
DB 416 CAGGAGCTTCAACGACGCGGACTTCCAGCTCCAGCTCACCACGCGCAACGGGCT 475
QY 695 GTCTGAGGTTTAAATTTGTTGACAAATTCCTAGACGCTCAGAACTATATCATAG 754
DB 476 GTCCGAGGCGCTCAAGCTCGTCTGATAAGTTTCTTGAGGACGTGAAGAAGCTC 535
QY 755 TGAGGCTTTTACCGTTTAAATTTTGGTGATACTGAGGAAGCTAAAAAGCAAAATTA 814
DB 536 CGAGGCTTTCACGTCACCTTCGGGACACCCGAGGAGCGGACGAGACGATCAACGA 595
QY 815 TGTGTAGAAGGACCCAGGCTAAGATCGTTGACCTAGTTTAAAGAAATTAAGATCG 874
DB 596 CGTCGAGAAGGAGACCCAGGCGAAGATCGTGGACCTTCAAGGAAATTTGGACAGG 655
QY 875 CGTCTCGCACTAGTTAACTATATTTTTCAGAGGTAAGTGGGACGCTCTTCGAGT 934
DB 656 CGTCTTCGGCTCGTCAACTACATCTTTCAGGGCAAGTGGGAGCGCCGCTTCGAGT 715
QY 935 TAAAGATCTGAAGGAAGATTTTCAATGTTGATCAAGTTACTGTCAAAAGTTCCAA 994
DB 716 GAAGGACACCGAGGAGGAGGACTTCCACGTCGACGAGGTCACCCGCTCAAGGT 775
QY 995 GATGAAGAGCTGGGTATGTTCAATTTCAATTTCAATTTCAATTTCAATTTCAAT 1054
DB 776 GATGAAGAGCTCGGATGTTTCAATTTCAATTTCAATTTCAATTTCAATTTCAAT 835
QY 1055 ATTAATGAAGTATTTAGGTAAGCTACTGCTATTTTTTTTTTACAGACGAAAGT 1114
DB 836 CCTCATGAAGTACCTGGGAAACGCCACCCGCTCTTCTTCCTCGGAGGAGGCAAG 895
QY 1115 TCAACATTTAGAGAAATGAGTTGACTCATGACATTAATTAATTAATTTTAGAAG 1174
DB 896 CCAGCACCTTGGAAGAGAGTGAAGCAGCAGATCATCAGCAAGTTCTTGGAAAGGA 955
QY 1175 TCGTCGTAGGCTTCTGCACTGCGCAAGTTAAGTATCAGCGTACTTACGACTTAA 1234
DB 956 CAGGCGCTCCGCTAGGCTCCACCTCCGGAAGCTGAGCATCCGCGACGACTGAA 1015
QY 1235 ATCTGTTTTAGGCGAGTATAGTATTAACCAAGTTTTTTTCTAACGGTCCGATTG 1294
DB 1016 GAGCGTCTGGGCGAGCTGGGCATCAGAAAGTTCTTTCAGCAACGCGGCGACTCT 1075
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QY 1295 TGTTACTGAAGAAGCTCCATTAATAATTAGTAAGCTGTTTCAAAAAGCGTCTTA 1354
DB 1076 CGTGACGAGGAGGCGCCCTGAAGCTTCCAAGGCTTCAAAAGCGGTGCTCAGAT 1135
QY 1355 TGATGAAGAAGGTACGAGCGCGCGCGCTATGTTCTCGGAAGCTATTCCCAATG 1414
DB 1136 CGACGAGAAGGGGACGGAAGCTGCCGGGCGCATGTTCTCTGGAGGCCATCCCA 1195
QY 1415 TCACACAGAAGTTAAATTAATAAACCATTCGTTTTTCTGATGATCGAGCAACT 1474
DB 1196 CCGCGCGGAGGTCAAGTTCAACAGCCCTTCGTCCTTCTGATGATCGAGCAAC 1255
QY 1475 AAGCCCATTTGTTATGGGTAAAGTTGTCAACCCCACTCAAGAAGT 1518
DB 1256 GAGCCCGCTCTTCATGGGAAGGTCTGTCACCCCGACGAGAAGT 1299
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RESULT 2

AR111411  
LOCUS  
DEFINITION Sequence 3 from patent US 6127145.  
ACCESSION AR111411  
VERSION AR111411.1 GI:12828259  
KEYWORDS  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE 1 (bases 1 to 1185)  
AUTHORS Sutliff,T.D. and Rodriguez,R.L.  
TITLE Production of alpha..sub.1.-antitrypsin in plants  
JOURNAL Patent: US 6127145-A 3 03-OCT-2000;  
FEATURES  
Location/Qualifiers  
source 1..1185  
BASE COUNT 276 a 396 c 334 g 179 t  
ORIGIN

Query Match 41.3%; Score 629.4; DB 6; Length 1185;  
Best Local Similarity 70.8%; Pred. No. 3.4e-125;  
Matches 837; Conservative 0; Mismatches 346; Indels 0; Gaps 0;

QY 336 GAAGACCTCAAGCGGACGCGCTCAAAAACGACACGACGATCATACGACCAAGACCAT 395  
DB 1 GAGGACCGCGAGGCGGACGCGCGCCAGAAAGCAGCAGCAGCAGCAGCAGCAGCAG 60  
QY 396 CCGACTTTTAAATAATAATTAATTAATTAATTAATTAATTAATTAATTAATTA 455  
DB 61 CCGAGTTCAACAAGATCACCCCGAATTTGGCCGAATTTGGCCTTCAGCCTGTAC 120  
QY 456 TTAGCTCATCAAGTAATTTCTACTAACAATTTTTTTTAGTCTGTTTCTATTGCCA 515  
DB 121 CTCGCGCACCAAGTCCAACTCCACCAACATCTTCTTCAGCCCGGTGAGCATCG 180  
QY 516 TTCGCCATGTTGAGTTAGTTAGTTACTAAAGCCGATACCCATGACGAGATTTTA 575  
DB 181 TTCGCCATGCTGTCCTCGGTTACCAAGCGGACACCCACGACGAGATCCTCGA 240  
QY 576 AACTTTAATTTGACCAAAATCCCAAGACCCCAAAATTCAGAGGTTTTCAGAGTT 635  
DB 241 AACTTCAACCTGACGGAGATCCCGGAGGCGAGATTCACGAGGCGTTCAGAGG 300  
QY 636 AGAAGTTGAATCAACCTGATTTCTCAATTGCAATTAAGTCTGTTTATTTTATTT 695  
DB 301 AGGACGCTCAACACCGGAGCTCCAGCTCCAGCTCACCACCGCGCAACGGGCT 360  
QY 696 TCTGAAGTTTAAATTTGTTGACAAAATTCCTAGAAGACGTCAGAAACTATATCAT 755  
DB 361 TCCGAGGCGCTCAAGCTCGTGAATGTTCTCGAGGACGTGAAGAAGCTCTACC 420  
QY 756 GAGGCTTTTACCGTTAATTTTGGTGATGACTGAGGAAGCTTAAAGACAAATTA 815  
DB 421 GAGGCGTTCAACCGTCAACTTCGGGAGACCCGAGGAGGCCAAGAGCAGATCA 480

QY	816	GTGTGAGAAAGGCACCCAGGTAAGATCGTTGACCTAGTTAAAGAAATTAGATCGTGATACC	875
Db	481	GTGAGAGAGGAGCCACGAGACATCGTGGACCTGGTCAAGAAATGGACAGGGACACC	540
QY	876	GTCTTCCGACTAGTTAACTATATTTTTTCAAGGGTAAGTGGGAAGCTCCTTTCCAGGTT	935
Db	541	GTCTTCCGCTCTCAACTACATCTTCTTCAAGGGCAAGTGGAGGCGCGTTCAGGTTG	600
QY	936	AAAGATACATGAAGAGGAAGATTTTCATGTGATCAAGTTACTACTGTCAAAAGTTCCAAATG	995
Db	601	AAGACACCGAGGAGGAGGACTTCCACGTCGACACAGGTCCACCACCGCTCAAGTCCCGATG	660
QY	996	ATGAAAGAGCTGGGTATGTTCATATTTCAATATTCAACATTGCAAAAATTAAGTTCTTGGGTCTTA	1055
Db	661	ATGAAGAGGCTCGGCATGTTCAACATCCAGACTGCAGAAAGCTCTCCAGCTGGGTGCTC	720
QY	1056	TTAATGAAGTATTAGGTAAAGCTACTGCTATTTTTTTTTTTTACAGACGAAGGTAAAGCTT	1115
Db	721	CTCATGAAGTACCTGGGGAACGCCACCGCATCTTCTTCTCGCGACGAGGCAAGCTC	780
QY	1116	CAACATTTAGAGAAATGAGTTGACTCATGACATATTACTAAATTTTITAGAGAACGAGAT	1175
Db	781	CAGCACTGGAGAACGAGCTGACGACGACATCATCAGCAAGTCTCGGAGAACGAGGAC	840
QY	1176	CGTCGAGCGCTTCTCTGCACCTGCCAAAGTTAAGTATCACCGGTACTTACGACTTAAAA	1235
Db	841	AGCGCTCGCTAGCCTCCACCTCCGGAAGCTGAGCATCACCGGCACGTACCACTGAAG	900
QY	1236	TCGTGTTTAGCGCAGTTAGTATTACCAAGTTTTTTCTTAAGCGTGGCCGATTTAGTGTT	1295
Db	901	AGCGTCTCGGCGAGCTGGGCACTACAGAAAGTCTTTCAGCAAGCGCGGACCTCTCCGCG	960
QY	1296	GTTACTGAAGAAGCTCCATTAAATTTAGTAAGCTGTTTCAAAAGCGCTCTTAAGTATT	1355
Db	961	GTACCGGAGAGGCCCCCTCGAGCTCTCAAGCGCGTCAAGCGGTGCTCAGATC	1020
QY	1356	GATGAAAAGGTTACCGAGCGCGCGCTATGTTCTCGGAAGCTATTCGAATGAGCATT	1415
Db	1021	GACGAGAAGGGACGGAAGCTGCGGGGCGCATGTTCTCGAGGCCATCCCCATGCCATC	1080
QY	1416	CCACCAAGAGTTAAATTTAATAACCATTCGTTTTTCTCATGATCGAGCAGAACACTAAA	1475
Db	1081	CGCCCGAGGTCAAGTTCAACAAAGCCCTTTCGCTTCTCTGATGATCGAGCAGAACACGAG	1140
QY	1476	AGCCCATGTTATGAGTGAAGTTGTCAACCCCAACTCAGAAGT	1518
Db	1141	AGCCCTCTTTCATGGGGAGGTGCTCAACCCCAAGCAGCAAGT	1183
RESULT 3			
HUMALATB			
LOCUS	HUMALATB	1345 bp	mRNA linear PRI 30-OCT-1994
DEFINITION	Human alpha 1-antitrypsin mRNA, complete cds.		
ACCESSION	M11465		
VERSION	M11465.1	GI:177826	
KEYWORDS	alpha 1-antitrypsin.		
SOURCE	Human liver, cDNA to mRNA.		
ORGANISM	Homo sapiens		
REFERENCE			
AUTHORS	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;		
TITLE	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.		
	Ciliberto,G., Dente,L. and Cortese,R.		
	Cell-specific expression of a transfected human alpha 1-antitrypsin		
JOURNAL	Cell	41 (2), 531-540 (1985)	
MEDLINE	85176977		
PUBMED	2985281		
REFERENCE	2 (sites)		
AUTHORS	Curiel,D., Brantly,M., Curiel,E., Stier,L. and Crystal,R.G.		
TITLE	Alpha 1-antitrypsin deficiency caused by the alpha 1-antitrypsin		
	Nullmatawa gene. An insertion mutation rendering the alpha		
	1-antitrypsin gene incapable of producing alpha 1-antitrypsin		
JOURNAL	J. Clin. Invest.	83 (4), 1144-1152 (1989)	
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Mon Dec 9 12:50:49 2002

Db 452 CCTGAAGCTAGTGGATAAGTTTGTGGAGGATGTTAAAGAGTTGTACCCTCAGAGGCGCTT 511  
 QY 764 TACCGTTAATTTTGGTGATCTAGCAAGCTAAAGAGCAAAATTAATGATTATGTTGAGAA 823  
 Db 512 CACTGTCAAGTTCGGGATCCACGAAGGCCAAGAAACAGATCAACGATAGTGGAGAA 571  
 QY 824 AGGCACCCAGGGTAAGATCGTTGACCTAGTTAAAGAAATAGATCGTGATACCGTCTTCGC 883  
 Db 572 GGGTACTCAAGGAAATTTGGTATTTGGTCAAGAGCTTGACAGAGACACAGTTTTCG 631  
 QY 884 ACTAGTTAATATATTTTCAAGGTAAGTGGGAACGCTCTTTCGAGGTTAAAGATAC 943  
 Db 632 TCTGGTCAATTTACATCTCTTTAAAGCAATGGGAGACCTTTTGAAGTCAAGGACAC 691  
 QY 944 TGAAGAGAGATTTTCATCTGTGATCAAGTTACTACTGTCAAAAGTTCCCAATGATGAAAG 1003  
 Db 692 CGAGGACGAGGACTTCACGCTGGACAGGTGACACCGTGAAGGTCCCTATGATGAGCG 751  
 QY 1004 ACTGGGTATGTTCAATATCAACATTTCAAAATAATTAAGTTCTTGGGTCTTATTAATGAA 1063  
 Db 752 TTTAGGATGTTTAAACATCCAGCACTGTAAGAAGCTGTCCAGCTGGGTACTGCTAATGAA 811  
 QY 1064 GTATTTAGGTAACGCTACTGCTATTTTTCACAGAGCAAGGTTAAGCTTCAACATTT 1123  
 Db 812 ATACCTGGCAATGCCACCGCATCTTCTTCTACCTGATGAGGGGAAACATACAGCACCT 871  
 QY 1124 AGAAGTGAAGTTGACTCATGACATTTACTTAAATTTTATAGAGAACGAGGATGTCGTAG 1183  
 Db 872 GGAATAAGTACTACCCACAGATATCATCAAGCTTCTGGAATAAGAACAGAGGTC 931  
 QY 1184 CGCTTCTCTGACCTGCCAAGTTAAGTATCACCGTACTTACGACATTAAGTCTGTTTT 1243  
 Db 932 TGCCAGCTTACATTTACCAAACTGTCCATTTACTTGAACCTATGATCTGAAGAGCGCT 991  
 QY 1244 AGGCAGTATAGTATTAACAAAGTTTCTTCAAGGTGCGGATTTGATGTTGTTACTGA 1303  
 Db 992 GGGTCAACTGGGCATCACTAAGGCTTTCAGCAATGGGGCTGACCTCTCCGGGTGCAGA 1051  
 QY 1304 AGAGCTCCATTAATTAAGTGAAGCTGTTCACAAAGCGCTTCTTAACATTTATGATGAAA 1363  
 Db 1052 GGAGCACCTCTGAGCTCTCAAGCGCTGCAATAGGCTGTGTCACCATCGACGAGAA 1111  
 QY 1364 GGGTACCGAGCCCGCGCTATGTTCTGGAAGCTATTTCCAAATGAGATTCACACAGA 1423  
 Db 1112 GGGGACTGAAGCTGCTGGGCGCATGTTTTTAGAGGCCATACCAATGTCTATCCGCCAGA 1171  
 QY 1424 AGTTAAATTAATAACCAATTCGTTTTCTGATGATGAGGAGAACACTAAAGGCCATT 1483  
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 E00631 1434 bp RNA linear PAT 29-SEP-1997  
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 DEFINITION E00631  
 ACCESSION E00631  
 VERSION E00631.1 GI:2168910  
 KEYWORDS JP 1986012289-A/1.  
 SOURCE Homo sapiens.  
 ORGANISM Homo sapiens.  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
 1 (bases 1 to 1434)  
 Maagaretso.W.I. and Guren,H.K.  
 REGION SPECIFIC MUTATION INDUCTION IN ALPHA-1-ANTI-TRYPSIN  
 TITLE Patent: JP 1986012289-A 1 20-JAN-1986;  
 JOURNAL CHIMO JIENETITSUKUSU INC  
 COMMENT OS human

PN JP 1986012289-A/1  
 PD 20-JAN-1986  
 PF 14-MAR-1985 JP 1985051553  
 PR 14-MAR-1984 US 84 589410, 07-MAR-1985 US 85 709382 PI  
 MAAGARETSUTO WAI INZURII, GUREN HITOSHI KAWASAKI PC  
 C12N15/00,A61K37/74,A61K37/64,C07H21/04,C07K15/04, PC  
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 PC C12N9/99,(C12P21/02,C12R1:865);  
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 CC topology: Linear;  
 CC hypothetical: No;  
 CC anti-sense: No;  
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Db 1281 TGGTGAATCCCAACCCCAAAATA 1302

RESULT 5  
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LOCUS 102706 1312 bp ss-DNA linear PAT 21-MAY-1993  
DEFINITION Sequence 1 from Patent US 4599311.  
ACCESSION 102706  
VERSION 102706.1 GI:268359  
KEYWORDS .  
SOURCE Unknown.  
ORGANISM Unknown.  
REFERENCE Unclassified.  
1 (bases 1 to 1312)  
AUTHORS Kawasaki,G.H.  
TITLE Glycolytic promoters for regulated protein expression: protease inhibitor  
JOURNAL Patent: US 4599311-A 1 08-JUL-1986;  
1547 - 16th Ave. East, Seattle, WA  
FEATURES Location/Qualifiers

source 1..1312 /Organism="unknown"  
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DEFINITION Sequence 5848 from Patent WO0194629.  
ACCESSION AX335339  
VERSION AX335339.1 GI:18126058  
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SOURCE human.  
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
1  
REFERENCE 1  
AUTHORS Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G.,  
Horrikan, S., Soppet, D.R. and Weaver, Z.  
TITLE Cancer gene determination and therapeutic screening using signature  
gene sets  
JOURNAL Patent: WO 0194629-A 5848 13-DEC-2001;  
Avalon Pharmaceuticals (US)  
FEATURES Location/Qualifiers  
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Query Match 28.4%; Score 433.2; DB 6; Length 1352;  
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LOCUS Human alpha-1-antitrypsin mRNA, complete cds.  
DEFINITION K01396  
ACCESSION K01396.1 GI:177828  
VERSION alpha-1-antitrypsin; antiprotease; antitrypsin.  
KEYWORDS Human liver, cDNA to mRNA, clones PULB1523 [1] and pTG603 [3].  
SOURCE Homo sapiens  
ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
REFERENCE 1 (bases 1 to 1352)  
AUTHORS Bollen,A., Herzog,A., Cravador,A., Herion,P., Chuchana,P., Vander Straten,A., Loriau,R., Jacobs,P. and van Elsen,A.  
TITLE Cloning and expression in Escherichia coli of full-length complementary DNA coding for human alpha 1-antitrypsin  
JOURNAL DNA 2 (4), 255-264 (1983)  
MEDLINE 84107980  
PUBMED 6319097  
REFERENCE 2 (bases 1 to 1352)  
AUTHORS Colau,B., Chuchana,P. and Bollen,A.  
TITLE Revised sequence of full-length complementary DNA coding for human alpha 1-antitrypsin  
JOURNAL DNA 3 (4), 327-330 (1984)  
MEDLINE 85026667  
PUBMED 6333329  
REFERENCE 3 (bases 95 to 286)  
AUTHORS Courtney,M., Buchwalder,A., Tessier,L.H., Jaye,M., Benavente,A., Balland,A., Kohli,V., Lathe,R., Tolstoshev,P. and Lecocq,J.P.  
TITLE High-level production of biologically active human alpha 1-antitrypsin in Escherichia coli  
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 81 (3), 669-673 (1984)  
MEDLINE 84144765  
PUBMED 6322161  
COMMENT Alpha-1-antitrypsin is synthesized in the liver and is a major constituent of plasma. It functions as an inhibitor of elastase, which degrades lung tissues. Hereditary deficiencies are fairly frequent, causing early lung degeneration and sometimes severe liver disorders. Defectives are particularly sensitive to pollution induced inflammation. Injection of anti-trypsin relieves the condition [1].

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BASE COUNT 349 a 386 c 325 g 292 t  
ORIGIN 90 bp upstream of DdeI site.  
Query Match 28.4%; Score 433.2; DB 9; Length 1352;  
Best Local Similarity 59.7%; Pred. No. 5.6e-83;  
Matches 729; Conservative 0; Mismatches 493; Indels 0; Gaps 0;

QY 298 TGTGTGTAAGTCTGTTGTTCCCGCTCAAGCCATGGAAGACCTCAAGGGCAGCCG 357  
DB 54 TGGCAGGCTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 113  
QY 358 CTCAGAAAACCGACACAGTCATCACGACCAAGACCATCCGACTCTTAATAAATAACTC 417  
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ACCESSION AX335338
VERSION AX335338.1 GI:18126057
KEYWORDS
SOURCE human.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1
AUTHORS Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G.,
Horrigan, S., Soppet, D.R. and Weaver, Z.
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VERSION X01683.1 GI:28965  
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Kurachi, K., Chandra, T., Degen, S.J., White, T.T., Marchioro, T.L.,  
Woo, S.L. and Davie, E.W.  
Cloning and sequence of cDNA coding for alpha 1-antitrypsin  
Proc. Natl. Acad. Sci. U.S.A. 78 (11), 6826-6830 (1981)  
82082539  
2 (bases 1 to 1371)  
7031661  
Bollen, A., Herzog, A., Cravador, A., Herion, P., Chuchana, P., Vander  
Straten, A., Lorlau, R., Jacobs, P. and van Elsen, A.  
Cloning and expression in *Escherichia coli* of full-length  
complementary DNA coding for human alpha 1-antitrypsin  
DNA 2 (4), 255-264 (1983)  
84107980  
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3 (bases 1 to 1352)  
Colau, B., Chuchana, P. and Bollen, A.  
Revised sequence of full-length complementary DNA coding for human  
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DNA 3 (4), 327-330 (1984)  
85026667  
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Rosenberg, S., Barr, P.J., Najarian, R.C. and Hallelwell, R.A.  
Synthesis in yeast of a functional oxidation-resistant mutant of  
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Nature 312 (5989), 77-80 (1984)  
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